

April 8, 1975

3400

Mr. C. W. Moody, State Forester
Alabama Forestry Commission
513 Madison Avenue
Montgomery, Alabama 36104

Dear Mr. Moody:

At the request of your personnel, a field trip was conducted to the Alabama State Seed Orchards at Atmore and Geneva, Alabama, on February 25, 1975, by Neil Overgaard of our office. He was accompanied by Raymond Covin, James Hyland, Jim Moya, Sam Brown and Paul Wingard of the Commission. The purpose of the trip was to examine the orchards for insect damage, and discuss insect control programs with Orchard personnel.

Atmore Orchard

The loblolly and slash cone crop at this Orchard is not as large as it could be. This may be due to insect depredation resulting from the fact that the orchard is not being sprayed as regularly as is the Geneva Orchard. Some coneworm damage was noted on some of last year's second-year loblolly cones, which were still attached to the trees. Some thrips damage to the current flower crop was noted on slash pines. Otherwise, there was little current cone or flower damage.

Geneva Orchard

The cone crop on loblolly pines at this orchard was excellent with no signs of insect attack on first-year flowers or second-year cones. Slash pines at the orchard are not yet at the age of full cone production. However, some thrips damage was noted on first-year flowers. The longleaf orchard has not come into cone production at the present time and very little insect damage was noted on this species.

Control Program

The current spray schedule at the Geneva Orchard consists of spraying once a month with Cygon^(R) (30.6 percent E.C.) at three pints per 100 gallons of water and Guthion^(R) (22 percent E.C.)

at six pints per 100 gallons of water from February through June with supplemental sprays of malathion ($1\frac{1}{2}$ pints, 57 percent E.C. per 100 gallons of water) when populations of scales or aphids become heavy.

It was suggested that Cygon^(R) for tip moth control be left out of the spray schedule since Guthion^(R) will control tip moths,^(R) coneworms and seedworms. For optimum coneworm control Guthion^(R) should be continued through August. Guthion is now registered for control of coneworms on all species of southern pines. The dosage rate for low volume mist blower applications is three pints of emulsifiable concentrate (22 percent) per 100 gallons of water (one percent) at approximately one or two gallons per tree.

To obtain thrips control on slash pines, two applications of malathion should be applied--one, when female flowers are breaking dormancy and the other approximately two weeks before flowers are open for pollination.

The registered dosage rate of Malathion 57 percent E.C. for thrips control on ornamental and shade trees is $1\frac{1}{2}$ pints per 100 gallons of water applied by hydraulic sprayer. This rate probably will not be effective as the dosage rate that showed promise during tests i by the Southeastern Forest Experiment Station for slash pine thrips control was 11 pints per 100 gallons of water applied by mist blower with approximately $\frac{2}{3}$ gallons of the mixture applied per tree. The latter rate has not as yet been registered.

It is impossible to properly evaluate insect losses on seed orchards by inspections such as the current one because insect conditions may change periodically. There also is no way to determine the effectiveness of the spray program because of there being no untreated trees for comparison. Therefore, it was suggested that a small portion of the orchard be left unsprayed so effectiveness of treatments can be monitored. A suggestion for monitoring insect damage would be to tag 10 percent of the conelet clusters and cones on two ramets of each of 10 clones in both treated and untreated areas on each geographical source being sprayed. Ideally, these should be monitored monthly to determine periods when losses are occurring, but could at least be examined at the end of the growing season to determine total losses for the season. Insects or insect damage on cones observed which cannot be identified by your personnel can be forwarded to us for identification. Such a monitoring system is in keeping with sound management of seed orchards.

Jim Moyer asked about light traps as a possible method for monitoring seed orchard insect populations, but this method has not been developed at the present time.

The possibility of conducting a training session for seed and cone insect identification and control for State and Private pine seed orchard managers in the State of Alabama this summer was discussed. State personnel thought that the session could best be held at or near the Geneva Orchard in Alabama. James Hyland agreed to help make contacts of industrial seed orchard personnel to see how many of them would be interested in attending. We would like to propose the dates of August 6th and 7th for holding such a session. Please let us know if these dates would be convenient for your personnel.

If you have any further questions concerning this information, or have problems in the future, please feel free to call on us.

Sincerely,

DONALD A.

DONALD A. PIERCE
Field Representative, Alexandria
Forest Pest Management Group

NAO:pmr